

**Work Order ID 73884**

Friday, September 16, 2011 3:26:30 PM

Page 1

Item ID: D206-642-151 *Left Hand*

Accept

Setup Start

Revision ID:

Stop

Item Name: Replacement Skidtube

Start Date: 9/16/2011 Start Qty: 1.00

Cust Item ID:

Required Date: 10/21/2011 Req'd Qty: 1.00

Customer:

Reference:

Approvals: Process Plan: *MF* Date: *11-09-19* Tooling:

Run Start

QC: Date: SPC (Y/N):

Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D3804	A
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UIN:D206-642	O
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0.00

100



DOCUMENT CONTROL

DC

0.00

Document Control

Memo

Photocopy bluefile &amp; type labels per PPP D206-642-151

CHG001

*N/A*

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

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Required Date: 10/21/2011 Req'd Qty: 1.00

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start  
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
110	Skidtubes	0.00							
Skidtubes	Memo	0.00							
Skidtubes	1-Deburr Fwd edge of tube								
	2- Remove ridge on inside of Fwd edge of tube as per Dwg D3804								
	3-Weld Fwd Cap as per Dwg D3804. Use aluminum rod. Grind D2647 to fit as required. Pick: Qty <input type="checkbox"/> Part Number <input type="checkbox"/> Description <input type="checkbox"/> Batch A/R <input type="checkbox"/> Aluminum Rod <input type="checkbox"/> m112860								
	4-Grind weld flush to cap on top surface only.								
	5-Cut Aft end as per dwg D3804 from front of tube and Deburr								
	6-Remove inner indexing ridge on Aft end of skidtube as per Dwg D3804								
	7-Open holes for Aft end cap as per Dwg D3804 with #30 Drill Bit using DT8025.								
	8-Drill pilot holes using Dt8166 & DT8169D & DT9771.								
	9-Locate DT8732 from inner Aft saddle hole & 3rd crossbolt hole. Insert D3286-1 doubler using DT8732 & D206-642-241-T1, then locating doubler off of 3/16" holes, cleco DT8732 & doubler leaving DT8732 for added support.								
	10- Drill D3286-1 doubler rivet holes in tube using # 30 drill, spot drilling doubler at the same time.								

MO/DP 11-9-20  
BE 11/09/20  
DP 11-9-20  
MO/DP 11-9-21  
DP 11/09/22  
DP 11-9-22

W/O:		WORK ORDER CHANGES					
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Run Start

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool # Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

11-Working from the center out, drill # 30 holes into D3286-1 doubler. Cleco each hole as it is being drilled. Verify angle of holes to accommodate rivet heads.

12-Remove 3/16" cleco's only and open GHW holes to Ø0.500" as per Dwg D3804

13-Remove D3286-1 doublers, identify orientation, deburr, then attach them to the workorder.

14-Remove indexing edge using DT8741 as per Dwg D3804

15-C'sink GHW rivet holes as per Dwg D3804

16- Open Aft cap hole #6.  
\*\*\*\*no wearplate holes for this skidtube\*\*\*\*

17-Deburr tube and blow out chips from inside the tube

120

QC6- Inspect dimensions to drawing

0.00

QC

Memo

0.00

Quality Control

11-9-22

11-9-28

11-07-28

W/O:		WORK ORDER CHANGES					
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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
140	Chemical Conversion Coat per QSI005 4.1	0.00							
	HandFinish								
	Hand Finishing								
	Memo	0.00							
150	QC3- Inspect Part Finish	0.00							
	QC								
	Quality Control								
	Memo	0.00							
160	Skidtubes	0.00							
	Skidtubes								
	Skidtubes								
	Memo	0.00							
	1-Open holes to finished size as per Dwg D3804, (without cutting fluid)								
	2-C'sink crossbolt spacer holes as per Dwg D3804(without cutting fluid)								
	3-Deburr and blow out all chips from inside the tube								

DC / SAD

11/09/11

DP

11-9-28

DC / SAD

11/09/28

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

170



QC

Quality Control

QC6- Inspect dimensions to drawing

0.00

Memo

0.00

*[Handwritten signature]*

*11-9-28*

180



Skid tubes

Skid tubes

Skid tubes

Memo

0.00

0.00

1-Locate, install and rivet doublers as per Dwg D3804. Micro-shave rivets as required

2-Bond D2654-3 web in place as per QSI 015. Ensure holes line up. Allow 12

Hrs. cure time before cutting

Start Date: *11/01/28* Time: *6:50*

Finish Date: \_\_\_\_\_ Time: \_\_\_\_\_

Pick:

Qty ☐ Part Number ☐ Description ☐ Batch

A/R ☐ Sikaflex-291 *11833* ☐

Sikaflex expire date: *12/04/05*

*[Handwritten signature]*  
*SAD*

*11/04/28*

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool # Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

190

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

11-9-29

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200		0.00							
	Skidtubes								
Skidtubes	Memo	0.00							
Skidtubes	1-remove alodine from around hole and prepare for welding								
	2-Prep per QSI 005 and Insert D2649 crossbolt spacers. Weld as per QSI 004 and Dwg D3804. Remember to back drill each hole to 0.25" before welding the other side. Use aluminum rod. Pick: Qty <input type="checkbox"/> Part Number <input type="checkbox"/> Description <input type="checkbox"/> Batch A/R <input type="checkbox"/> Aluminum Rod <input type="checkbox"/> 117884								
	3-Grind welds flush as per Dwg D3804.								
	4-Using DT8733, insert (2) D3286-3 spacers as per QSI 004 and Dwg D3804. Remember to back drill each hole to Ø0.402" before welding other side. Use SS rod as required. A/R <input type="checkbox"/> SS Rod <input type="checkbox"/> None								
	5-Counterbore 5/16" x 0.750" deep except 7th hole from Aft end as per Dwg D3804. Deburr								

OC/D

11/09/29

BB 11/10/01

11.09.30

PMR 11/10/03  
11/00/03

11-10-3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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210

0.00



HandFinishing

HandFinish

Memo

0.00

Hand Finishing

Install D2680-041 Nut Plate as per Dwg D3804

11-10-3

220

QC10- Inspect visual per QSI004- ground welds

0.00



QC

Memo

0.00

Quality Control

8/11/04

QC9

11.10.04

230

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

8/11/04

W/O:		WORK ORDER CHANGES					
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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start  
Stop

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
240	Pressure Wash per QSI005 4.3	0.00							
HandFinish	Memo	0.00				1-	BR	11-10-6	
Hand Finishing									
250	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
Powdercoat	Memo	0.00							
Powder Coating	START TIME: 1:00 OVEN TEMPERATURE: 320°F FINISH TIME: 1:30	0.00							
260	QC3- Inspect Part Finish	0.00							
QC	Memo	0.00							
Quality Control									

12/11/10/06

164 0 11/10/11

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
270		0.00							
	HandFinishing								
HandFinish	Memo	0.00							
Hand Finishing	1-Install D2651-3 O-Rings on D2651-1 plugs with Petroleum Jelly and install plugs as per Dwg D3804. Clean excess adhesive.								
280		0.00							
	HandFinishing								
HandFinish	Memo	0.00							
Hand Finishing	1-Install D2646 Aft Cap and seal with Sikaflex. Clean excess adhesive A/R <input type="checkbox"/> Sikaflex-291 <input checked="" type="checkbox"/> 1118393 Sikaflex expire date: <input type="checkbox"/> 12)								
	2- Install wearplate as per dwg								
	2-Wing Walk as per Dwg D3804 and QSI 005 4.4 Batch: 1118313								

Handwritten notes and signatures:

1-124 0 11/10/11

1-124 0 11/10/11

W/O:		WORK ORDER CHANGES						
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Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

290

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

8/11/12

Quality Control

300

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

8/11/12

Quality Control

41

LM

310

Packaging

0.00



Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D206-642-151

Location: PPP

PPP Rev: 74393

8/11/12

W/O:		WORK ORDER CHANGES						
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Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

320

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/10/2011  
MF  
11-10-19

W/O:		WORK ORDER CHANGES					
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Picklist Print

Friday, September 16, 2011 3:26:26 PM

Page 1

Work Order ID: 73884

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube




Start Date: 9/16/2011


Required Date: 10/21/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP REV:A 10.12.08 PER IIN REV.N DD VERF:EC IPP  
REV:B 11.09.16 PER IIN REV.O DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status																														
D2620 		Manufactured	No			110	Each	12.0000	1	1																																	
Skidtube, 206 Skidtube																																											
<table><tr><td></td><td><u>Location</u></td><td><u>Loc Qty</u></td><td><u>Loc Code</u></td><td></td></tr><tr><td></td><td>LG 73787</td><td>12</td><td></td><td>1</td></tr><tr><td></td><td>68136</td><td>1</td><td></td><td></td></tr><tr><td></td><td>71616</td><td>5</td><td></td><td></td></tr><tr><td></td><td>71617</td><td>6</td><td></td><td></td></tr></table>															<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>			LG 73787	12		1		68136	1				71616	5				71617	6							
	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>																																								
	LG 73787	12		1																																							
	68136	1																																									
	71616	5																																									
	71617	6																																									
D2647 		Manufactured	No			110	Each	44.0000	1	1																																	
Cap																																											
<table><tr><td></td><td><u>Location</u></td><td><u>Loc Qty</u></td><td><u>Loc Code</u></td><td></td></tr><tr><td></td><td>LG002</td><td>44</td><td></td><td></td></tr><tr><td></td><td>55352</td><td>14</td><td></td><td></td></tr><tr><td></td><td>71171</td><td>30</td><td></td><td>1</td></tr></table>															<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>			LG002	44				55352	14				71171	30		1										
	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>																																								
	LG002	44																																									
	55352	14																																									
	71171	30		1																																							
CR3212-4-04 		Purchased	No			180	Each	1,655.000	52	52																																	
Cherry Rivet																																											
<table><tr><td></td><td><u>Location</u></td><td><u>Loc Qty</u></td><td><u>Loc Code</u></td><td></td></tr><tr><td></td><td>ST311</td><td>1655</td><td></td><td>53</td></tr><tr><td></td><td>116471</td><td>78</td><td></td><td></td></tr><tr><td></td><td>117816</td><td>477</td><td></td><td></td></tr><tr><td></td><td>118686</td><td>100</td><td></td><td></td></tr><tr><td></td><td>118840</td><td>1000</td><td></td><td></td></tr></table>															<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>			ST311	1655		53		116471	78				117816	477				118686	100				118840	1000		
	<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>																																								
	ST311	1655		53																																							
	116471	78																																									
	117816	477																																									
	118686	100																																									
	118840	1000																																									

mo  11-9-20

BE 11/09/20

DC 

11/09/29

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Friday, September 16, 2011 3:26:26 PM

Work Order ID: 73884

Parent Item: D206-642-151

Parent Item Name: Replacement Skidtube

Start Date: 9/16/2011

Required Date: 10/21/2011

Start Qty: 1.00

Required Qty: 1.00

D2654-1 Manufactured No

180

Each

6.0000

1

1



Web

Location

Loc Qty

Loc Code

75789

LG

6

64562

6

D3286-1 Manufactured No

180

Each

32.0000

2

2



Doubler

Location

Loc Qty

Loc Code

LG002

32

52844

11

64563

21

D2649 Manufactured No

200

Each

289.0000

19

19



Cross Bolt Spacer

Location

Loc Qty

Loc Code

LG

6

68224

2

71355

2

72704

2

LG001

283

65317

1

68507

11

73390

271

D3286-3 Manufactured No

200

Each

27.0000

2

2



Spacer

Location

Loc Qty

Loc Code

LG002

27

64564

27

B 74117

DC/10/09/29

2 DC/11/09/29

19

P.B. 11/10/03  
LJ 11/10/08

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

# Picklist Print

Friday, September 16, 2011 3:26:26 PM

Page 3

Work Order ID: 73884



Parent Item: D206-642-151



Parent Item Name: Replacement Skidtube

Start Date: 9/16/2011

Required Date: 10/21/2011

Start Qty: 1.00

Required Qty: 1.00

D2680-041 Manufactured No

210 Each

19.0000

1 1



Nut Plate

Location Loc Qty

ST020 19

55366 17

70088 2

Loc Code

② DP 11-10-3

CR3212-4-03 Purchased No

210 Each

1,138.000

2 2



Cherry Rivet

Location Loc Qty

FP-B 2

110139 2

ST311 1136

114859 1136

Loc Code

② DP 11-10-3

AN960JD416 NAS1149D0463J Purchased No

210 Each

0.0000

1 1



Washer

1118384

(x1) HL 11-10-3

CCR264SS3-3 Purchased No

210 Each

435.0000

2 2



Cherry Rivet

Location Loc Qty

FP-B 2

113973 2

ST311 433

117086 23

117849 410

Loc Code

② DP 11-10-3

Friday, September 16, 2011 3:26:26 PM

Shop Packet Print

Page 3

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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# Picklist Print

Friday, September 16, 2011 3:26:26 PM

Work Order ID: 73884



Parent Item: D206-642-151



Parent Item Name: Replacement Skidtube

Start Date: 9/16/2011

Required Date: 10/21/2011

Start Qty: 1.00

Required Qty: 1.00

MS27039-4-06

Purchased

No

210

Each

29.0000

1

1



HL 11/10/14

Screw

Location

Loc Qty

Loc Code

FP-A

8

115460

8

ST292

21

115460

21

X1

D2651-1

Manufactured

No

270

Each

289.0000

6

6



HL 11/10/14

Plug

Location

Loc Qty

Loc Code

fpa

109

69018

109

FP-A

180

X6

57869

1

66445

10

67760

36

70691

100

70839

2

71037

31

D2651-3

Manufactured

No

270

Each

799.0000

6

6



HL 11/10/14

O-Ring

Location

Loc Qty

Loc Code

FP-A

799

61962

12

66956

282

73489

505

X6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries



# Picklist Print

Friday, September 16, 2011 3:26:26 PM

Work Order ID: 73884



Parent Item: D206-642-151



Parent Item Name: Replacement Skidtube

Start Date: 9/16/2011

Required Date: 10/21/2011

Start Qty: 1.00

Required Qty: 1.00

D3873-1

Manufactured No

280

Each

160.0000

14

14



el

10/20/11

Bushing

Location

Loc Qty

Loc Code

ST084

4

B73829

x 14

68247

4

ST088

156

64760

1

70690

54

71837

101

D2646

Manufactured No

280

Each

89.0000

1

1



el

10/10/11

Aft Cap

Location

Loc Qty

Loc Code

FP004

45

68280

45

FP006

5

62678

5

FP-4

35

70945

1

71070

34

fp5

4

71038

4

D3805-041

Manufactured No

280

Each

0.0000

1

1



(x1) el

10/10/11

Wearplate Assembly Fwd, Low Gear

B73814

B73770

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

# Picklist Print

Friday, September 16, 2011 3:26:27 PM

Work Order ID: 73884



Parent Item: D206-642-151



Parent Item Name: Replacement Skidtube

Start Date: 9/16/2011

Required Date: 10/21/2011

Start Qty: 1.00

Required Qty: 1.00

MS27039-1-08

Purchased

No

280

Each

1,296.000

2

2



22 11/10/11

Screw

## Location

## Loc Qty

## Loc Code

ST291

1296

115108

96

117423

300

118378

400

118910

500

x7

MS21042L3

Purchased

No

280

Each

2,603.000

7

7



22 11/10/11

Nut

## Location

## Loc Qty

## Loc Code

ST300

2603

117441

24

117601

374

117885

205

118451

1000

118927

1000

x7

D3805-045

Manufactured

No

280

Each

6.0000

1

1



(x1) 22 11/10/11

Wearplate Assembly Aft, Low Gear

## Location

## Loc Qty

## Loc Code

FP

6

70878

6

AN960JD10L

NAS1149D0332J

Purchased

No

280

Each

0.0000

2

2



(x2) 22 11/10/11

Washer

22 11/10/11

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

Page 7

Friday, September 16, 2011 3:26:27 PM

Work Order ID: 73884



Parent Item: D206-642-151



Parent Item Name: Replacement Skidtube

Start Date: 9/16/2011

Required Date: 10/21/2011

Start Qty: 1.00

Required Qty: 1.00

AN3-37A Purchased No  
  
 Bolt

X

280 Each 261.0000 7 7



9/16/11

Location

Loc Qty

Loc Code

ST353

211

111668

111

118628

100

ST354

50

117619

50

y7

NAS1149D0363J Purchased No  
  
 Washer

280 Each 2,623.000 7 7



9/16/11

Location

Loc Qty

Loc Code

ST298

2623

117601

308

118077

1315

118612

1000

y7

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

ITEM	Qty -041	Qty -043	Part Number	Description
1	X		D3804-041	SKIDTUBE ASSEMBLY, 206 A/B LOW
2		X	D3804-043	SKIDTUBE ASSEMBLY, 206 A/B HIGH
5	1	1	D2600-1-160	EXTRUSION
6	1	1	D2646	AFT CAP
7	1	1	D2647	CAP
8	19	20	D2649	CROSS BOLT SPACER
9	6	8	D2651-1	PLUG
10	6	8	D2651-3	O-RING
11		1	D2654-3	WEB
12	1		D2654-1	WEB
13	1	1	D2680-041	NUT PLATE
14	2	2	D3286-1	DOUBLER
15	2	2	D3286-3	STUD
21	2	2	AN960JD10L	WASHER
22	1	1	AN960JD416	WASHER
23	2	2	CCR264SS3-3	RIVET
24	2	2	CR3212-4-03	RIVET
25	52	52	CR3212-4-04	RIVET
26	2	2	MS27039-1-08	SCREW
27	1	1	MS27039-4-06	SCREW

#### NOTES

- 1) MATERIAL: N/A
- 2) FINISH: -CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
-POWDER COAT WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) UNITS: INCHES UNLESS OTHERWISE NOTED
- 6) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 7) IDENTIFICATION: NONE
- 8) WEIGHT: 12.5 lb
- 9) WELD PER DART QSI 004
- 10) BENDING: DAMAGE TOLERANCE ON FWD BEND:  
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 11) BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 015
- 12) INSERT D2651-1 PLUG C/W D2651-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE)

# 73884

RELEASED  
UP 09.03.03  
PC ECN 09-596

A	NEW ISSUE	MB	08.07.07
REV.	DESCRIPTION	BY	DATE
DESIGN	99	DART AEROSPACE USA, INC	
DRAWN	99	PORT HADLOCK, WA	
CHECKED	99	DRAWING NO.	REV. A
MFG. APPR.	99	D3804	SHEET 1 OF 5
APPROVED	99	TITLE	SCALE
DE APPR.	99	SKIDTUBE ASSEMBLY, 206A/B	NTS
DATE	08.07.07	COPYRIGHT © 2008 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMERCIAL OR CALIBRATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

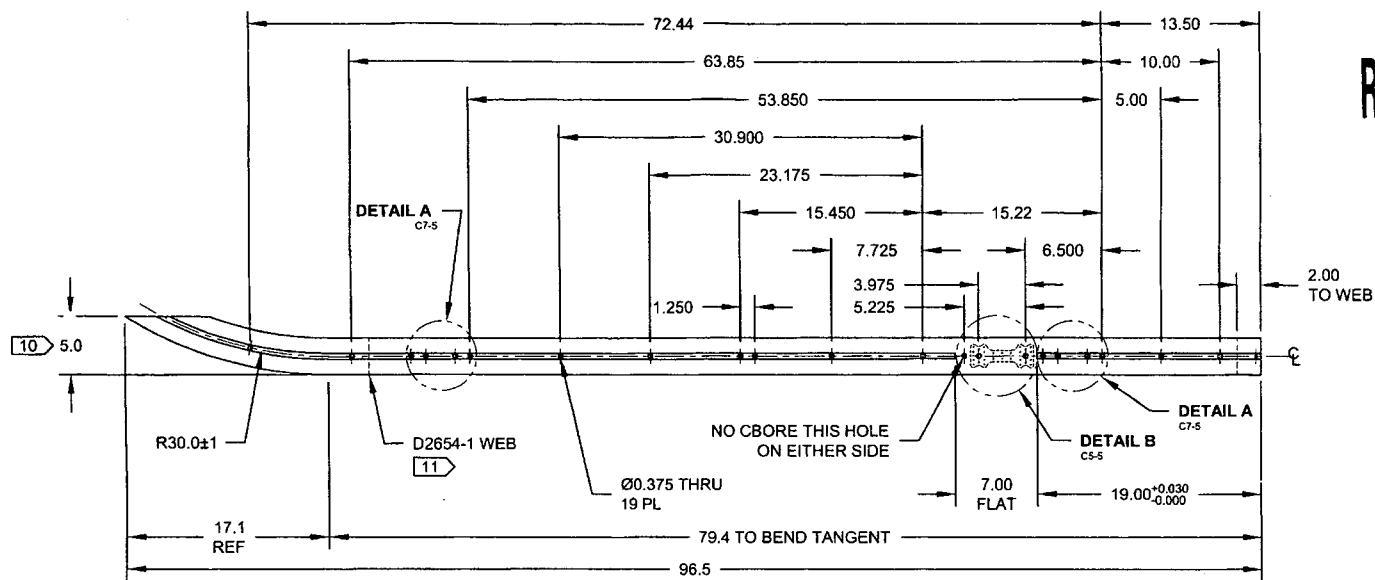
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

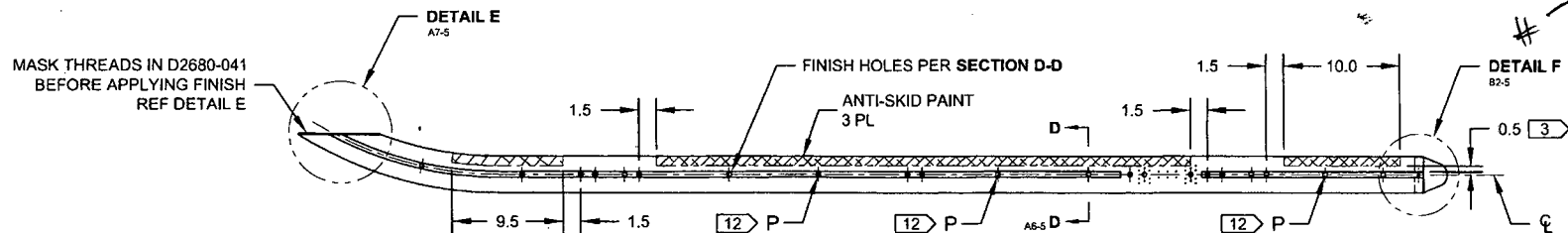
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





**D3804-041 BENDING/DRILLING DETAIL**



### D3804-041 ASSEMBLY/FINISHING DETAIL

DESIGN	99	<b>DART AEROSPACE USA, INC</b>	
DRAWN	99	PORT HADLOCK, WA	
CHECKED	99	DRAWING NO.	REV. A
MFG. APPR.	99	D3804	SHEET 2 OF 5
APPROVED	99	TITLE	SCALE
DE APPR.	99	SKIDTUBE ASSEMBLY, 206A/B	NTS
DATE	08.07.07	COPYRIGHT © 2008 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRINTED AND/OR COPIED UNDER THE AUTHORITY OF THE ISSUING ORGANIZATION. IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED BY ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE USA, INC.	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

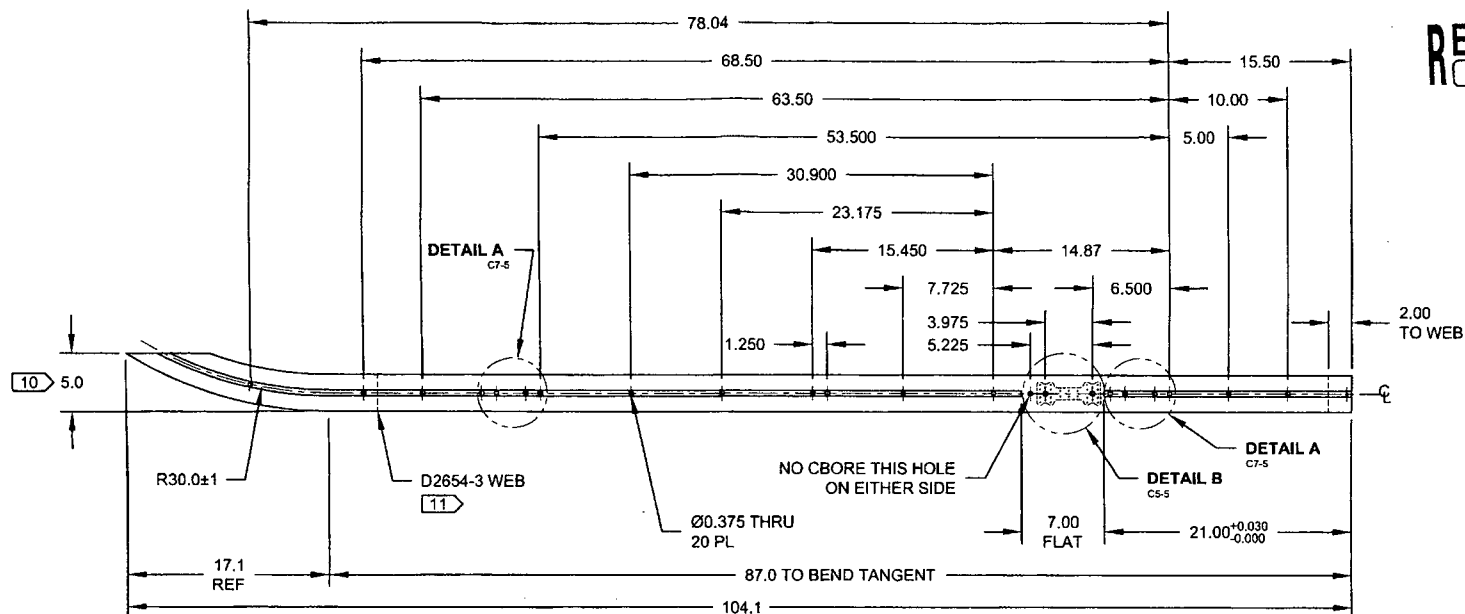
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

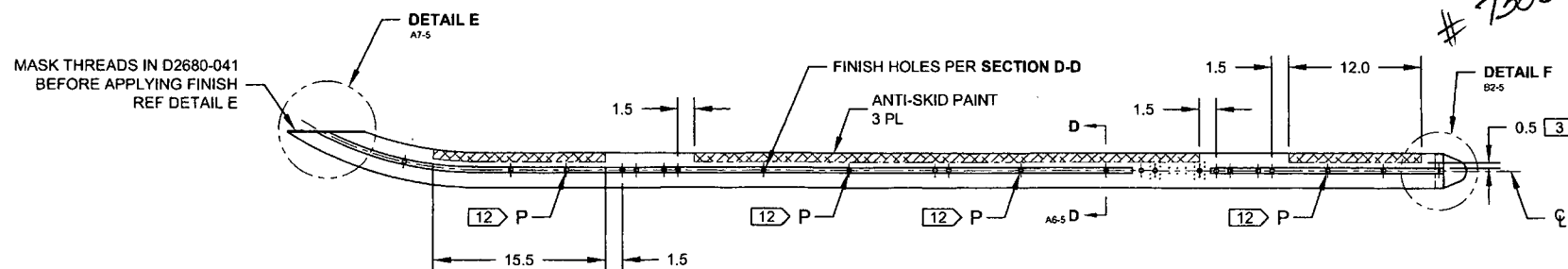
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

RELEASED  
09.03.03



**D3804-043 BENDING/DRILLING DETAIL**



**D3804-043 ASSEMBLY/FINISHING DETAIL**

DESIGN	99	DART AEROSPACE USA, INC	
DRAWN	99	PORT HADLOCK, WA	
CHECKED	99	DRAWING NO.	REV. A
MFG. APPR.	99	D3804	SHEET 3 OF 5
APPROVED	99	TITLE	SCALE
DE APPR.	99	SKIDTUBE ASSEMBLY, 206A/B	NTS
DATE	08.07.07	COPYRIGHT © 2008 BY DART AEROSPACE USA, INC	
THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.			

# 73584

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

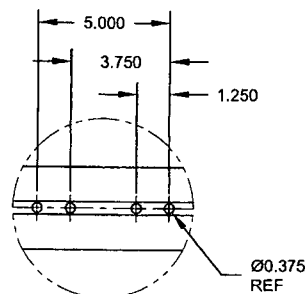
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

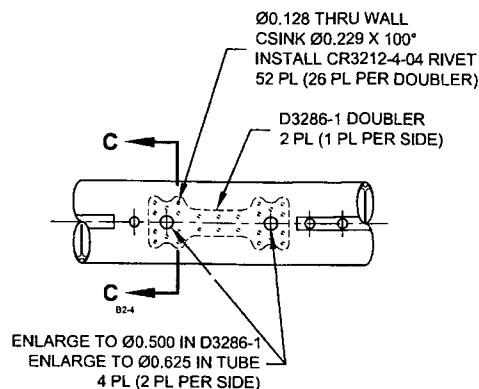
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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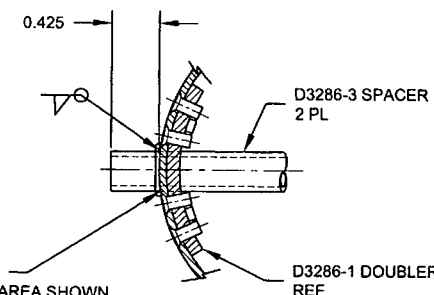
RELEASED  
09.03.03



**DETAIL A**  
SCALE NONE  
D6-2  
C2-2  
D6-3  
C2-3

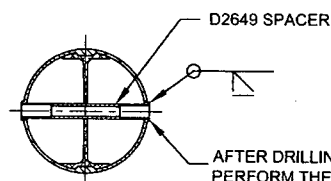


**DETAIL B**  
SCALE NONE  
C3-2  
C3-3



- TO INSTALL D3286-1/-3:
1. GRIND OFF FLANGE IN AREA SHOWN, FLUSH WITH OUTSIDE SURFACE OF ROUND TUBE
  2. LOCATE & DRILL D3286-1 DOUBLER USING DT3286-1T1
  3. ENLARGE HOLES IN D3286-1 TO Ø0.500
  4. ENLARGE HOLES IN TUBE TO Ø0.625 AND CHAMFER HOLE 0.03 X 45°
  5. RIVET D3286-1 TO TUBE
  6. INSERT D3286-3 SPACER
  7. WELD IN PLACE AND GRIND FLUSH

**SECTION C-C**  
PARTIAL SECTION  
SCALE NONE  
C6-4



- AFTER DRILLING AND BENDING ASSEMBLY PERFORM THE FOLLOWING FOR Ø0.375 HOLES ONLY:
1. CHAMFER HOLE 0.03 X 45°
  2. INSERT D2649 SPACER
  3. WELD INTO PLACE AND GRIND FLUSH
  4. CBORER TO Ø0.313 X 0.75 DP (EXCEPT WHERE INDICATED)

**SECTION D-D**  
FOR Ø0.375 HOLES ONLY  
SCALE NONE  
A4-2  
A4-3

#73884

DESIGN	9	<b>DART AEROSPACE USA, INC</b>	
DRAWN	J	PORT HADLOCK, WA	
CHECKED	9	DRAWING NO.	REV. A
MFG. APPR.	E	D3804	SHEET 4 OF 5
APPROVED	H	TITLE	SCALE
DE APPR.	H	SKIDTUBE ASSEMBLY, 206A/B	NTS
DATE	08.07.07	<small>COPYRIGHT © 2008 BY DART AEROSPACE USA, INC THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

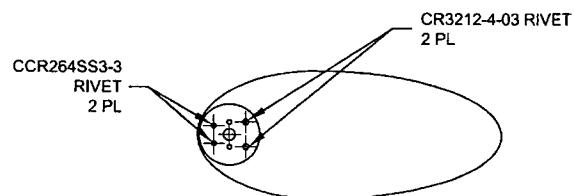
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Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

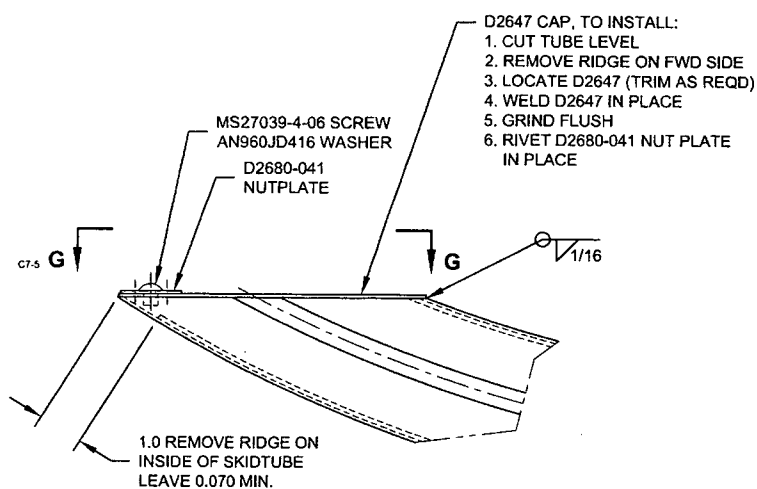
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

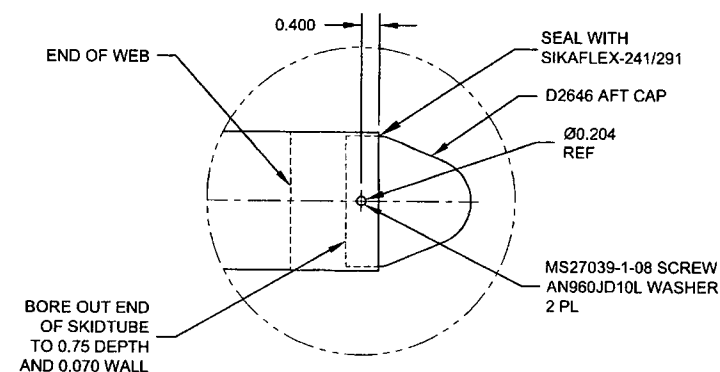
RELEASED  
09.03.03



**VIEW G-G**  
SCALE NONE A7-5



**DETAIL E**  
SCALE NONE B7-2 B7-3



**DETAIL F**  
SCALE NONE B2-2 B2-3

#73884

DESIGN	97	<b>DART AEROSPACE USA, INC</b>	
DRAWN	97	PORT HADLOCK, WA	
CHECKED	97	DRAWING NO.	REV. A
MFG. APPR.	97	D3804	SHEET 5 OF 5
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



NO. 268

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Art Ewers  
Job number: B73883  
Part number: A206-642-151  
Description: Skid tube  
Welding Process: Tig[X] Mig[ ]  
Base material: Alum  
Current: AC[✓] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[✓] fail[ ]  
Penetration: pass[✓] fail[ ]

UNACCEPTABLE

Cracks: pass[✓] fail[ ]  
Undercut: pass[✓] fail[ ]  
Pin holes: pass[✓] fail[ ]  
Overlap (cold lap): pass[✓] fail[ ]  
Porosity (surface): pass[✓] fail[ ]  
Coloration: pass[✓] fail[ ]

Qualifier Samir Anwar Date of Test Coupon 6.10.04  
Welder Art Ewers Date of Test Coupon 6.10.04

The above named individual is qualified in accordance with AWS D17.1.2001 to weld